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(71) Applicant (for all designated States except US): **THE UNIVERSITY OF QUEENSLAND** [AU/AU]; St Lucia, Queensland 4067 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DODDRELL, David, Michael** [AU/AU]; 6 Lucerne Street, Westlake, Queensland 4074 (AU). **CROZIER, Stuart** [AU/AU]; 60 Main Street, Wilston, Queensland 4051

(AU). **LUESCHER, Kurt** [AU/AU]; 108 Russell Terrace, Indooroopilly, Queensland 4068 (AU). **ROFFMANN, Wolfgang, Udo** [AU/AU]; 57 Tallowood Place, Mt Gravatt East, Queensland 4122 (AU).

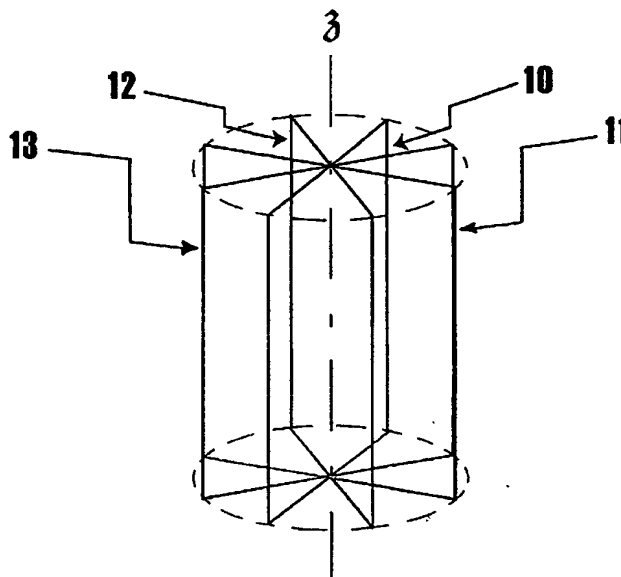
(74) Agent: **CULLEN & CO**; Level 26, 239 George Street, Brisbane, Queensland 4000 (AU).

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[Continued on next page]

(54) Title: COIL ARRAY FOR MAGNETIC RESONANCE IMAGING



(57) Abstract: A radio frequency (RF) coil array is used in resonance imaging and/or analysis of a subject located within a cylindrical space in which a magnetic field is operatively applied in an axial direction (z). The coil array comprises a plurality of coil elements (10,11,12,13) angled relative to each other about the axis of the cylindrical space, each coil element having a pair of main conductors extending generally parallel to the direction of the magnetic field and located on diametrically opposite sides of the cylindrical space, and a pair of connection conductors connected between respective ends of the main conductors. Each coil element has its maximum sensitivity near the centre of the cylindrical space, so that the subject under study is located in a region of maximum sensitivity.

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INTERNATIONAL SEARCH REPORT

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| Int. Cl. ⁷ : G01R 33/3415, G01N 24/08 | | |
| According to International Patent Classification (IPC) or to both national classification and IPC | | |
| B. FIELDS SEARCHED | | |
| Minimum documentation searched (classification system followed by classification symbols) | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched | | |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT (image, plural, array, coil, conductoor, antenna, cylinder, axial resonance) | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 6411090 B1 (BOSKAMP) 25 June 2002 Column 3, line 36 - column 4, line 44; column 5, lines 8-24 | 1-18 |
| X | US 4833409 A (EASH) 23 May 1989 Column 3, line 58 - column 6, line 46 | 1-18 |
| X | EP 301232 B1 (GENERAL ELECTRIC COMPANY) 15 February 1995 Column 6, line 14 - column 11, line 7 | 1-18 |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex | | |
| <p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"B" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p> | | |
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| Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929 | | Authorized officer J. LAW Telephone No : (02) 6283 2179 |

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| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
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| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 4686473 A (CHESNEAU et al.) 11 August 1987 Column 3 line 10 - column 9, line 47 | 1-18 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/01116

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in Search Report | | | Patent Family Member | | |
|---|---------|----|----------------------|----|------------|
| US | 6411090 | EP | 1273926 | JP | 2003033332 |
| US | 4833409 | EP | 322192 | JP | 2004329 |
| EP | 301232 | FI | 882859 | JP | 1104253 |
| | | | | US | 4799016 |
| US | 4686473 | EP | 170558 | FR | 2567647 |
| END OF ANNEX | | | | | |